

KENWOOD

Listen to the Future



GENERAL CATALOGUE

Private Mobile Radios





Japan: Yokohama Headquarters



Testing



Manufacturing

Tuned into Technology — Kenwood Communications

Based in Yokohama, Japan, Kenwood is renowned throughout the world as a leader in wireless radio technologies. Kenwood transceivers are serving in key communication roles on every continent. And it's not hard to see why.

Kenwood radios offer exceptional quality and dependability, reflected in strong customer confidence. A conspicuous example is provided by the leading-edge digital radios used by Team McLaren Mercedes in the demanding world of F1 racing, where clear communications are essential. But not all Kenwood's customers enjoy celebrity status: reliable communications are just as vital to routine operations in the public safety sector – including police, fire and coastguard departments – in the transport and utility industries, at airports and power stations. Kenwood radios are also playing an important part in various commercial applications – in factories, restaurants, retail stores, hotels and taxis. And Kenwood is at the forefront of the industry's shift toward digital radio technologies, supplying equipment compatible with the Project 25 format.

In addition to its extensive range of PMR products, Kenwood also boasts an attractive lineup of amateur radio products, including low-power transceivers for outdoor recreational activities like skiing and trekking. Wherever and whenever people need to talk, there's where you'll find Kenwood.

Offering models designed to satisfy virtually all requirements, Kenwood is ready to serve as a reliable partner for your communication needs. And as a premier systems supplier, Kenwood has considerable experience of networks.

Kenwood implements an integrated approach to everything from market research to sales, always seeking to provide optimum solutions using the latest technical innovations. R&D and design work are undertaken in Yokohama and Singapore, where meticulous care is paid to every detail – ensuring, for instance, that a radio is easy to use even in noisy environments, and that it can reliably withstand harsh environmental conditions.

Kenwood radios are subjected to a variety of grueling tests to verify that they meet or exceed standards for extreme temperatures, and resistance to water, dust, vibration, and impact. Thorough quality control procedures assure that these products can be entrusted with mission-critical operations. Kenwood radios have justifiably earned a reputation for dependability.

The actual manufacturing takes place at Kenwood's factories in Singapore, Bintang, Shanghai and Yamagata, where every effort is made to enhance quality, raise productivity, and protect the environment. Continuous product improvement is why Kenwood radios will continue to set new standards for performance and reliability, playing an increasingly important role in the world of communications.



TK-2180/3180

VHF/UHF FM Portable Radios

FleetSync® **5-tone** **MPT1327** **Lone Worker** **GPS**
You'll never work alone.

- MPT1327 upgradeable
- FleetSync®
- Max. 512 channels
- 5 watt VHF & UHF models
- 5-tone signalling
- Dual priority scan
- QT/DQT & DTMF
- Enhanced Kenwood audio
- Lone worker
- Transparent data mode
- Easy option port (26-pin)
- Built-in voice inversion scrambler
- GPS ready
- 12-digit dot matrix LCD
- IP54/55 and MIL-STD 810C/D/E/F
- Voting



TK-2170/3170

Compact VHF/UHF FM Portable Radios

FleetSync® **5-tone** **Lone Worker**
You'll never work alone.

- FleetSync®
- Max. 128 channels
- 5-tone signalling
- QT/DQT & DTMF
- Enhanced Kenwood audio
- 8-character LCD
- Built-in voice inversion scrambler
- Lone worker
- Priority scan
- IP54/55 and MIL-STD 810C/D/E/F
- Battery status indicator
- Easy option port (20-pin)



TK-2160/3160

Compact VHF/UHF FM Portable Radios

FleetSync® **5-tone** **Lone Worker**
You'll never work alone.

- FleetSync®
- 16 channels
- Priority scan & talk back
- Programmable function keys
- 5-tone signalling
- QT/DQT & DTMF
- Programmable call alert tones
- Enhanced Kenwood audio
- Built-in voice inversion scrambler
- Lone worker

Portable Radios



TK-2202/3202

VHF/UHF FM Portable Radios

- Voice annunciation
- 8 channels
- Internal VOX ready/hands-free operation
- Enhanced Kenwood audio
- Built-in voice inversion scrambler
- QT/DQT
- 2 programmable function keys
- Priority scan
- IP54/55 and MIL-STD 810C/D/E/F



TK-2140/3140

Compact VHF/UHF FM Portable Radios

FleetSync® **5-tone**

- FleetSync®
- Max. 250 channels
- 5-tone signalling
- QT/DQT & DTMF
- 12-digit dot matrix LCD
- IP54/55 and MIL-STD 810C/D/E/F
- Battery status



PMR446



TK-3201

PMR446 Transceiver

ProTalk®

- Approx. 283 grams with KNB-45L, belt clip and cap
- Long battery operation (20 hours with KNB-45L)
- Voice annunciation
- 16 channels, 8 pre-stored frequencies
- QT/DQT: 38 tone (QT: 26 tone/DQT: 12 code) + off
- Enhanced Kenwood audio
- Priority scan
- Built-in voice inversion scrambler
- IP54/55 and MIL-STD 810C/D/E/F





TK-7189/8189

VHF/UHF FM Mobile Radios

FleetSync® **5-tone** **MPT1327** **Lone Worker** **GPS**

- Full keypad of TK-7180/8180
- MPT1327 upgradeable
- Remote control head (option)
- FleetSync®
- Wide-band operation
- Max. 25 watts VHF & UHF models
- 5-tone signalling
- Max. 512 channels
- Dual priority scan
- QT/DQT & DTMF
- Enhanced Kenwood audio
- Lone worker
- Transparent data mode
- Easy option port (26-pin)
- GPS ready (NMEA0183 compatible)
- 12-digit dot matrix LCD
- Built-in voice inversion scrambler
- DB-25 accessory connector



TK-7180/8180

VHF/UHF FM Mobile Radios

FleetSync® **5-tone** **MPT1327** **Lone Worker** **GPS**

- MPT1327 upgradeable
- Remote control head (option)
- FleetSync®
- Wide-band operation
- Max. 25 watts VHF & UHF models
- 5-tone signalling
- Max. 512 channels
- Dual priority scan
- QT/DQT & DTMF
- Enhanced Kenwood audio
- Lone worker
- Transparent data mode
- Easy option port (26-pin)
- GPS ready (NMEA0183 compatible)
- 12-digit dot matrix LCD
- Built-in voice inversion scrambler
- DB-25 accessory connector



TK-7160/8160

VHF/UHF FM Mobile Radios

FleetSync® **5-tone** **Lone Worker**

- FleetSync®
- Max. 128 channels
- Enhanced Kenwood audio
- 5-tone signalling
- QT/DQT & DTMF
- Priority scan
- Programmable function keys
- Built-in voice inversion scrambler
- GPS ready (NMEA0183 compatible)
- Lone worker
- 8-character LCD



TK-7162/8162

VHF/UHF FM Mobile Radios

FleetSync® **5-tone** **Lone Worker**

- FleetSync®
- 16 channels
- Enhanced Kenwood audio
- Priority scan
- Built-in voice inversion scrambler
- 5-tone signalling
- QT/DQT & DTMF
- Lone worker
- Programmable function keys



TKR-750/850

VHF/UHF FM Repeaters

- High power 50W
- 16 full-duplex channels and single priority scan
- QT/DQT with DSP multi-decode



TKR-751/851

VHF/UHF FM Repeaters

- Power max. 25W
- High stability 100% continuous duty
- 16 full-duplex channels and single priority scan
- QT/DQT with DSP multi-decode

AVL PC Software / GPS Speaker Microphone



KGS-3

FleetSync® AVL & Dispatch Messaging Software

FleetSync® 5-tone

- 5-tone/FleetSync® GPS AVL data compatible
- Various arts of icons and tags, viewing options, and even more functions in command
- 100 vehicle tracking capacity
- Mapping enabled with Microsoft® MapPoint® 2004 or 2006
- Multi-language menu: English, French, German, Italian, Spanish
- Historical logging & fire playback, emergency alert system
- Compatible radios: TK-7189/8189, TK-7180/8180

KMC-38GPS

GPS Speaker Microphone (Compatible with TK-2180/3180 only)





FleetSync® 5-tone GPS



- Programmable with radio software
- Compatible software: Kenwood KGS-3 or aftermarket FleetSync® AVL software
- Noise-cancelling
- 3.5mm earphone jack
- GPS data can be displayed on radio's LCD
- Event-controlled GPS auto-reporting
- User controlled GPS reporting
- Dispatch-controlled GPS reporting
- Rotary clip
- Li-ion memory backup battery cell
- IP-54/55 water & dust intrusion compliant





Optional Accessories for Portable Radios

■ Antennas







	KRA-22	KRA-23	KRA-26	KRA-27
	VHF Helical Antenna Short Type	UHF Helical Antenna Short Type	VHF Helical Antenna	UHF Whip Antenna
				
TK-2180/3180	●	●	●	●
TK-2140/3140	●	●	●	●
TK-2170/3170	●	●	●	●
TK-2160/3160	●	●	●	●
TK-2202/3202	●	●	●	●




■ Batteries

	KNB-33L	KNB-32N	KNB-31A	KNB-35L	KNB-26N	KNB-25A
	Li-ion Battery 7.4V/1700mAh	Ni-MH Battery 7.2V/2500mAh	Ni-Cd Battery 7.2V/1700mAh	Li-ion Battery 7.2V/1950mAh	Ni-MH Battery 7.2V/2000mAh	Ni-Cd Battery 7.2V/1200mAh
						
TK-2180/3180	●	●	●	—	—	—
TK-2140/3140	—	—	—	●	●	●
TK-2170/3170	—	—	—	●	●	●
TK-2160/3160	—	—	—	●	●	●
TK-2202/3202	—	—	—	—	—	—
TK-3201	—	—	—	—	—	—

	KNB-45L	KNB-29N	KNB-30A	KBP-6	KBP-5
	Li-ion Battery 7.4V/2000mAh	Ni-MH Battery 7.2V/1500mAh	Ni-Cd Battery 7.2V/1100mAh	Alkaline Battery Case	Alkaline Battery Case
					
TK-2180/3180	—	—	—	●	—
TK-2140/3140	—	—	—	—	●
TK-2170/3170	—	—	—	—	●
TK-2160/3160	—	—	—	—	●
TK-2202/3202	●	●	●	—	—
TK-3201	●	●	●	—	—

■ Chargers







	KSC-32	KSC-25	KSC-30	KSC-35	KSC-31	KVC-17
	Rapid Rate Charger	Rapid Rate Charger	Standard Rate Charger	Rapid Rate Charger	Standard Rate Charger	Vehicular Charger
						
TK-2180/3180	●	—	—	—	—	●
TK-2140/3140	—	●	●	—	—	—
TK-2170/3170	—	●	●	—	—	—
TK-2160/3160	—	●	●	—	—	—
TK-2202/3202	—	—	—	● (for KNB-45L)	●	—
TK-3201	—	—	—	● (for KNB-45L)	●	—







	KVC-14	KVC-16	KVC-19
	Vehicular Charger	Vehicular Charger	Vehicular Charger
			
TK-2180/3180	—	—	—
TK-2140/3140	●	—	—
TK-2170/3170	●	—	—
TK-2160/3160	●	—	—
TK-2202/3202	—	●	● (for KNB-45L)
TK-3201	—	●	● (for KNB-45L)







All accessories and options may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories and options.




Optional Accessories for Portable Radios

■ Audio Accessories

	KHS-11BL 2-Wire Palm Mic. with Earphone	KHS-12BL 3-Wire Mini Lapel Mic. with Earphone	KHS-14 Lightweight Single Muff Headset	KHS-15-OH Over-the-Head Heavy Duty Headset	KHS-8BL 2-Wire Palm Mic. with Earphone	KHS-9BL 3-Wire Lapel Mic. with Earphone
						
TK-2180/3180	●	●	●	●	—	—
TK-2140/3140	●	●	●	●	—	—
TK-2170/3170	—	—	—	—	●	●
TK-2160/3160	—	—	—	—	●	●
TK-2202/3202	—	—	—	—	●	●
TK-3201	—	—	—	—	●	●

	KHS-7 Lightweight Single Muff Headset	KHS-10-OH Over-the-Head Heavy Duty Headset	KEP-1 3.5mm Earphone Kit	KEP-2 2.5mm Earphone Kit	KHS-1 Headset with VOX/PPT	KHS-21 Headset without VOX/PPT
						
TK-2180/3180	—	—	●	—	—	—
TK-2140/3140	—	—	●	—	—	—
TK-2170/3170	●	●	—	●	●	●
TK-2160/3160	●	●	—	●	●	●
TK-2202/3202	●	●	—	●	●	●
TK-3201	●	●	—	●	●	●

	KHS-22 Behind-the-Head Lightweight Headset	KHS-28F Clip Microphone with Earhanger	EMC-6 Clip Microphone with Earphone	KMC-25 Speaker Microphone	KMC-41 IP-55 Speaker Microphone	KMC-42W IP-67 Speaker Microphone
						
TK-2180/3180	—	—	—	●	●	●
TK-2140/3140	—	—	—	●	●	●
TK-2170/3170	●	●	●	—	—	—
TK-2160/3160	●	●	●	—	—	—
TK-2202/3202	●	●	●	—	—	—
TK-3201	●	●	●	—	—	—

	KMC-38GPS GPS Speaker Microphone	KMC-17 Speaker Microphone	KMC-21 Compact Low-Profile Speaker Microphone
			
TK-2180/3180	●	—	—
TK-2140/3140	—	—	—
TK-2170/3170	—	●	●
TK-2160/3160	—	●	●
TK-2202/3202	—	●	●
TK-3201	—	●	●

■ Belt Clips & Others

	KBH-11 Belt Clip	KBH-12 Belt Clip	KBH-10 Belt Clip	KWR-1 Water Resistant Bag
				
TK-2180/3180	●	—	—	—
TK-2140/3140	—	●	—	—
TK-2170/3170	—	●	—	—
TK-2160/3160	—	●	—	—
TK-2202/3202	—	—	●	●
TK-3201	—	—	●	●

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Optional Accessories for Portable Radios

Cases

	KLH-125	KLH-136	KLH-115	KLH-140NC	KLH-140PC/PG	KLH-118
	Nylon Case	Hard Leather Case	Soft Leather Case	Nylon Case	Hard Leather Case	Soft Leather Case
TK-2180/3180	●	●	—	—	—	—
TK-2140/3140	—	—	●	—	—	—
TK-2170/3170	—	—	—	●	●	—
TK-2160/3160	—	—	—	—	—	●
TK-2202/3202	—	—	—	—	—	—
TK-3201	—	—	—	—	—	—

	KLH-119	KLH-131	KLH-120
	Hard Leather Case	Nylon Case	Soft Leather Case
TK-2180/3180	—	—	—
TK-2140/3140	—	—	—
TK-2170/3170	—	—	—
TK-2160/3160	●	—	—
TK-2202/3202	—	●	●
TK-3201	—	●	●

Programming Tools for Portable Radios

	KPG-36A	KPG-22A	KPG-92D	KPG-74D M2	KPG-101D	KPG-82D
	Programming Interface	Programming Interface	Programming Software	Programming Software	Programming Software	Programming Software
TK-2180/3180	●	—	●	—	—	—
TK-2140/3140	●	—	—	●	—	—
TK-2170/3170	—	●	—	—	●	—
TK-2160/3160	—	●	—	—	—	●
TK-2202/3202	—	●	—	—	—	—
TK-3201	—	●	—	—	—	—

	KPG-87D M2	KPG-90D
	Programming Software	Programming Software
TK-2180/3180	—	—
TK-2140/3140	—	—
TK-2170/3170	—	—
TK-2160/3160	—	—
TK-2202/3202	●	—
TK-3201	—	●

Optional Accessories for Mobile Radios







Programming Tools for Mobile Radios


	KPG-46A	KPG-92D	KPG-99D	KPG-91D
	Programming Interface	Programming Software	Programming Software	Programming Software
TK-7189/8189	●	●	—	—
TK-7180/8180	●	●	—	—
TK-7160/8160	●	—	●	—
TK-7162/8162	●	—	●	—
TKR-750/850	●	—	—	●
TKR-751/851	●	—	—	●

All accessories and options may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories and options.







Optional Accessories for Mobile Radios







■ Audio Accessories


	KMC-35	KMC-36	KMC-30	KMC-32	KMC-9C	KES-5
	Standard Microphone	Keypad Microphone	Standard Microphone	Keypad Microphone	Desktop Microphone	External Speaker, 40W
						
TK-7189/8189	●	●	●	●	●	●
TK-7180/8180	●	●	●	●	●	●
TK-7160/8160	●	●	●	●	●	●
TK-7162/8162	●	●	●	●	●	●
TKR-750/850	●	●	●	●	●	●
TKR-751/851	●	●	●	●	●	●

	KES-3
	External Speaker, 3W
	
TK-7189/8189	●
TK-7180/8180	●
TK-7160/8160	●
TK-7162/8162	●
TKR-750/850	●
TKR-751/851	●

■ Power Supply, Cables and Others

	KPS-10A	KRK-10	KCT-23 M3	KCT-40	KCT-46	KCT-36
	Power Supply	Remote Panel Kit	DC Cable	Interface Cable	Ignition Sense Cable	Extension Cable (3m)
						
TK-7189/8189	●	●	●	●	●	—
TK-7180/8180	●	●	●	●	●	—
TK-7160/8160	—	—	—	—	—	●
TK-7162/8162	●	—	—	—	—	●
TKR-750/850	●	—	—	—	—	—
TKR-751/851	●	—	—	—	—	—

	KCT-39	KCT-18	KAP-2	KLF-2	KGS-3	KDI-03
	Connection Cable	Ignition Sense Cable	PA, HA Unit	Line Filter	AVL PC Software	DIN-size Mounting Bracket
						
TK-7189/8189	—	—	●	●	●	●
TK-7180/8180	—	—	●	●	●	●
TK-7160/8160	●	●	●	●	—	●
TK-7162/8162	●	●	●	●	—	●
TKR-750/850	—	—	—	—	—	—
TKR-751/851	—	—	—	—	—	—

	KMB-10
	Key Lock Adaptor
	
TK-7189/8189	●
TK-7180/8180	●
TK-7160/8160	●
TK-7162/8162	●
TKR-750/850	—
TKR-751/851	—

■ KDI-03 DIN-size mounting bracket in use



All accessories and options may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories and options.

Specifications

VHF Portable Radios

	VHF	VHF	VHF	VHF	VHF
	TK-2180	TK-2140	TK-2170	TK-2160	TK-2202
GENERAL					
Frequency Range	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz
Number of Channels	Max. 512*1	Max. 250*1	Max. 128*1	16	8
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Channel Spacing	12.5, 20, 25 kHz	12.5, 20, 25 kHz	12.5, 20, 25 kHz	12.5, 20, 25 kHz	12.5, 20, 25 kHz
Operating Voltage	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %
Battery Life (5-5-90 duty cycle)	Approx. 10 hours with KNB-33L (1700 mAh)	Approx. 11 hours with KNB-35L (1950 mAh)	Approx. 11 hours with KNB-35L (1950 mAh)	Approx. 11 hours with KNB-35L (1950 mAh)	Approx. 12 hours with KNB-45L (2000 mAh)
	Approx. 14 hours with KNB-32N (2500 mAh)	Approx. 12 hours with KNB-26N (2000 mAh)	Approx. 12 hours with KNB-26N (2000 mAh)	Approx. 12 hours with KNB-26N (2000 mAh)	Approx. 10 hours with KNB-29N (1500 mAh)
	Approx. 9 hours with KNB-31A (1700 mAh)	Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 8 hours with KNB-30A (1100 mAh)
Operating Temperature Range	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C
Frequency Stability	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)
Dimensions (W x H x D)	58 x 136 x 21.5 mm	56 x 105 x 21.9 mm	56 x 109 x 16.6 mm	56 x 109.3 x 18.4 mm	54 x 122 x 21.1 mm
	58 x 136 x 33 mm with KNB-33L	56 x 105 x 29.5 mm with KNB-35L	56 x 109 x 31.7 mm with KNB-35L	56 x 109.3 x 34.5 mm with KNB-35L	54 x 122 x 33 mm with KNB-45L
	58 x 136 x 39.5 mm with KNB-32N / 31A	56 x 105 x 35.7 mm with KNB-26N / 25A	56 x 109 x 37.9 mm with KNB-26N / 25A	56 x 109.3 x 40.7 mm with KNB-26N / 25A	54 x 122 x 33 mm with KNB-29N / 30A
Weight (net)	260 g	170 g	185 g	165 g	160 g
(includes supplied accessories)	400 g with KNB-33L	295 g with KNB-35L	310 g with KNB-35L	290 g with KNB-35L	280 g with KNB-45L
	560 g with KNB-32N	410 g with KNB-26N	425 g with KNB-26N	405 g with KNB-26N	360 g with KNB-29N
	530 g with KNB-31A	360 g with KNB-25A	375 g with KNB-25A	355 g with KNB-25A	340 g with KNB-30A
RECEIVER					
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
Sensitivity					
12 dB SINAD	0.28 μV (25 kHz)	0.25 μV (25kHz)	0.25 μV (25 kHz)	0.25 μV (25 kHz)	0.28 μV (25 kHz)
	0.28 μV (20 kHz)	0.25 μV (20 kHz)	0.25 μV (20 kHz)	0.25 μV (20 kHz)	0.28 μV (20 kHz)
	0.32 μV (12.5 kHz)	0.28 μV (12.5 kHz)	0.32 μV (12.5 kHz)	0.32 μV (12.5 kHz)	0.35 μV (12.5 kHz)
20 dB SINAD	-3 dBμV (25 kHz)	-4 dBμV (25kHz)	-4 dBμV (25 kHz)	-4 dBμV (25 kHz)	-3 dBμV (25 kHz)
	-3 dBμV (20 kHz)	-4 dBμV (20 kHz)	-4 dBμV (20 kHz)	-4 dBμV (20 kHz)	-3 dBμV (20 kHz)
	-2 dBμV (12.5 kHz)	-3 dBμV (12.5 kHz)	-3 dBμV (12.5 kHz)	-3 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)
Selectivity	73 dB (25 kHz)	75 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)
	73 dB (20 kHz)	75 dB (20 kHz)	70 dB (20 kHz)	70 dB (20 kHz)	70 dB (20 kHz)
	63 dB (12.5 kHz)	65 dB (12.5 kHz)	62 dB (12.5 kHz)	62 dB (12.5 kHz)	62 dB (12.5 kHz)
Intermodulation Rejection	65 dB	68 dB	65 dB	65 dB	65 dB
Spurious Response Rejection	70 dB	70 dB	70 dB	70 dB	70 dB
Audio Output	500 mW with less than 3 % distortion	500 mW with less than 5 % distortion	500 mW with less than 5 % distortion	500 mW with less than 10 % distortion	500 mW with less than 10 % distortion
Channel Frequency Spread	38 MHz	38 MHz	38 MHz	38 MHz	38 MHz
TRANSMITTER					
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
RF Power Output	5 W (Hi) / 1 W (Low)	5 W (Hi) / 1 W (Low)	5 W (Hi) / 1 W (Low)	5 W (Hi) / 1 W (Low)	5 W (Hi) / 1 W (Low)
Modulation	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)
	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)
	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)
Spurious Emission	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz
	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz
FM Hum & Noise	45 dB (25kHz)	45 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)
	45 dB (20 kHz)	45 dB (20 kHz)	43 dB (20 kHz)	43 dB (20 kHz)	43 dB (20 kHz)
	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)
Microphone Impedance	2 kΩ	2 kΩ	2 kΩ	2 kΩ	2 kΩ
Audio Distortion	Less than 3 %	Less than 3 %	Less than 5 %	Less than 5 %	Less than 5 %
Channel Frequency Spread	38 MHz	38 MHz	38 MHz	38 MHz	38 MHz

*1 Maximum capability depends on the number of programmed zones/groups and repeater channels.

Specifications

■ UHF Portable Radios

	UHF	UHF	UHF	UHF	UHF
	TK-3180	TK-3140	TK-3170	TK-3160	TK-3202
GENERAL					
Frequency Range	Type E: 400 ~ 470 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz
Number of Channels	Max. 512*1	Max. 250*1	Max. 128*1	16	8
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Channel Spacing	12.5, 20, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz
Operating Voltage	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %	7.5 V DC ± 20 %
Battery Life (5-5-90 duty cycle)	Approx. 10 hours with KNB-33L (1700 mAh) Approx. 14 hours with KNB-32N (2500 mAh) Approx. 9 hours with KNB-31A (1700 mAh)	Approx. 11 hours with KNB-35L (1950 mAh) Approx. 12 hours with KNB-26N (2000 mAh) Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 11 hours with KNB-35L (1950 mAh) Approx. 12 hours with KNB-26N (2000 mAh) Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 11 hours with KNB-35L (1950 mAh) Approx. 12 hours with KNB-26N (2000 mAh) Approx. 8 hours with KNB-25A (1200 mAh)	Approx. 12 hours with KNB-45L (2000 mAh) Approx. 10 hours with KNB-29N (1500 mAh) Approx. 8 hours with KNB-30A (1100 mAh)
Operating Temperature Range	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C
Frequency Stability	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)
Dimensions (W x H x D)	58 x 136 x 21.5 mm 58 x 136 x 33 mm with KNB-33L 58 x 136 x 39.5 mm with KNB-32N / 31A	56 x 105 x 21.9 mm 56 x 105 x 29.5 mm with KNB-35L 56 x 105 x 35.7 mm with KNB-26N / 25A	56 x 109 x 16.6 mm 56 x 109 x 31.7 mm with KNB-35L 56 x 109 x 37.9 mm with KNB-26N / 25A	56 x 109.3 x 18.4 mm 56 x 109.3 x 34.5 mm with KNB-35L 56 x 109.3 x 40.7 mm with KNB-26N / 25A	54 x 122 x 21.1 mm 54 x 122 x 33 mm with KNB-45L 54 x 122 x 33 mm with KNB-29N / 30A
Weight (net) (includes supplied accessories)	260 g 400 g with KNB-33L 560 g with KNB-32N 530 g with KNB-31A	170 g 295 g with KNB-35L 410 g with KNB-26N 360 g with KNB-25A	185 g 310 g with KNB-35L 425 g with KNB-26N 375 g with KNB-25A	165 g 290 g with KNB-35L 405 g with KNB-26N 355 g with KNB-25A	160 g 280 g with KNB-45L 360 g with KNB-29N 340 g with KNB-30A
RECEIVER					
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
Sensitivity					
12 dB SINAD	0.28 μV (25 kHz) 0.28 μV (20 kHz)	0.25 μV (25 kHz) 0.25 μV (20 kHz)*2	0.25 μV (25 kHz) 0.25 μV (20 kHz)*2	0.25 μV (25 kHz) 0.25 μV (20 kHz)*2	0.28 μV (25 kHz) 0.28 μV (20 kHz)*2
20 dB SINAD	0.32 μV (12.5 kHz) -3 dBμV (25 kHz) -3 dBμV (20 kHz) -2 dBμV (12.5 kHz)	0.28 μV (12.5 kHz) -4 dBμV (25 kHz) -4 dBμV (20 kHz)*2 -3 dBμV (12.5 kHz)	0.32 μV (12.5 kHz) -4 dBμV (25 kHz) -4 dBμV (20 kHz)*2 -3 dBμV (12.5 kHz)	0.32 μV (12.5 kHz) -4 dBμV (25 kHz) -4 dBμV (20 kHz)*2 -3 dBμV (12.5 kHz)	0.35 μV (12.5 kHz) -3 dBμV (25 kHz) -3 dBμV (20 kHz)*2 -2 dBμV (12.5 kHz)
Selectivity	73 dB (25 kHz) 73 dB (20 kHz) 63 dB (12.5 kHz)	75 dB (25 kHz) 75 dB (20 kHz)*2 65 dB (12.5 kHz)	70 dB (25 kHz) 70 dB (20 kHz)*2 62 dB (12.5 kHz)	70 dB (25 kHz) 70 dB (20 kHz)*2 62 dB (12.5 kHz)	70 dB (25 kHz) 70 dB (20 kHz)*2 62 dB (12.5 kHz)
Intermodulation Rejection	65 dB	68 dB	65 dB	65 dB	65 dB
Spurious Response Rejection	70 dB	70 dB	70 dB	70 dB	70 dB
Audio Output	500 mW with less than 3 % distortion	500 mW with less than 5 % distortion	500 mW with less than 5 % distortion	500 mW with less than 10 % distortion	500 mW with less than 10 % distortion
Channel Frequency Spread	70 MHz	30 MHz	30 MHz	30 MHz	30 MHz
TRANSMITTER					
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
RF Power Output	5 W (Hi) / 1 W (Low)	4 W (Hi) / 1 W (Low)	4 W (Hi) / 1 W (Low)	4 W (Hi) / 1 W (Low)	4 W (Hi) / 1 W (Low)
Modulation	± 5.0 kHz (25 kHz) ± 4.0 kHz (20 kHz) ± 2.5 kHz (12.5 kHz)	± 5.0 kHz (25 kHz) ± 4.0 kHz (20 kHz)*2 ± 2.5 kHz (12.5 kHz)	± 5.0 kHz (25 kHz) ± 4.0 kHz (20 kHz)*2 ± 2.5 kHz (12.5 kHz)	± 5.0 kHz (25 kHz) ± 4.0 kHz (20 kHz)*2 ± 2.5 kHz (12.5 kHz)	± 5.0 kHz (25 kHz) ± 4.0 kHz (20 kHz)*2 ± 2.5 kHz (12.5 kHz)
Spurious Emission	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz
FM Hum & Noise	45 dB (25 kHz) 45 dB (20 kHz) 40 dB (12.5 kHz)	45 dB (25 kHz) 45 dB (20 kHz)*2 40 dB (12.5 kHz)	45 dB (25 kHz) 43 dB (20 kHz)*2 40 dB (12.5 kHz)	45 dB (25 kHz) 43 dB (20 kHz)*2 40 dB (12.5 kHz)	45 dB (25 kHz) 43 dB (20 kHz)*2 40 dB (12.5 kHz)
Microphone Impedance	2 kΩ	2 kΩ	2 kΩ	2 kΩ	2 kΩ
Audio Distortion	Less than 3 %	Less than 3 %	Less than 5 %	Less than 5 %	Less than 5 %
Channel Frequency Spread	70 MHz	30 MHz	30 MHz	30 MHz	30 MHz

*1 Maximum capability depends on the number of programmed zones/groups and repeater channels.

*2 Type E only

VHF Mobile Radios

	VHF	VHF	VHF	VHF
	TK-7189	TK-7180	TK-7160	TK-7162
GENERAL				
Frequency Range	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz	Type E: 136 ~ 174 MHz
Number of Channels	Max. 512* ¹	Max. 512* ¹	Max. 128* ¹	Max. 16* ¹
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Channel Spacing	12.5, 20, 25 kHz	12.5, 20, 25 kHz	12.5, 20, 25 kHz	12.5, 20, 25 kHz
Input Voltage	13.2 V DC (10.8 ~ 15.6 V DC)	13.2 V DC (10.8 ~ 15.6 V DC)	13.6 V DC ± 15 %	13.6 V DC ± 15 %
Current Drain	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A
	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A
	Transmit: 9.0 A	Transmit: 9.0 A	Transmit: 8.0 A	Transmit: 8.0 A
Operating Temperature Range	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C
Frequency Stability	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)
Dimensions (W x H x D)	160 x 45 x 157 mm	160 x 45 x 157 mm	160 x 43 x 107 mm	160 x 43 x 107 mm
Weight (net)	1.5 kg	1.5 kg	1.0 kg	1.0 kg
RECEIVER				
Measurement	EN Standard	EN Standard	EN Standard	EN Standard
Sensitivity				
12 dB SINAD	0.25 µV (25 kHz)	0.25 µV (25 kHz)	0.28 µV (25 kHz)	0.28 µV (25 kHz)
	0.25 µV (20 kHz)	0.25 µV (20 kHz)	0.28 µV (20 kHz)	0.28 µV (20 kHz)
	0.28 µV (12.5 kHz)	0.28 µV (12.5 kHz)	0.35 µV (12.5 kHz)	0.35 µV (12.5 kHz)
20 dB SINAD	-3 dBµV (25 kHz)	-3 dBµV (25 kHz)	-3 dBµV (25 kHz)	-3 dBµV (25 kHz)
	-3 dBµV (20 kHz)	-3 dBµV (20 kHz)	-3 dBµV (20 kHz)	-3 dBµV (20 kHz)
	-2 dBµV (12.5 kHz)	-2 dBµV (12.5 kHz)	-2 dBµV (12.5 kHz)	-2 dBµV (12.5 kHz)
Selectivity	80 dB (25 kHz)	80 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)
	75 dB (20 kHz)	75 dB (20 kHz)	70 dB (20 kHz)	70 dB (20 kHz)
	70 dB (12.5 kHz)	70 dB (12.5 kHz)	60 dB (12.5 kHz)	60 dB (12.5 kHz)
Intermodulation Rejection	70 dB	70 dB	65 dB	65 dB
Spurious Response Rejection	80 dB	80 dB	70 dB	70 dB
Audio Output	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion
Channel Frequency Spread	38 MHz	38 MHz	38 MHz	38 MHz
TRANSMITTER				
Measurement	EN Standard	EN Standard	EN Standard	EN Standard
RF Power Output	Max. 25 W	Max. 25 W	5 W / 25 W	5 W / 25 W
Modulation	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)
	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)
	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)
Spurious Emission	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz
	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz
FM Hum & Noise	50 dB (25 kHz)	50 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)
	48 dB (20 kHz)	48 dB (20 kHz)	43 dB (20 kHz)	43 dB (20 kHz)
	45 dB (12.5 kHz)	45 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)
Microphone Impedance	600 Ω	600 Ω	600 Ω	600 Ω
Audio Distortion	Less than 3 %	Less than 3 %	3 % / 5 %	3 % / 5 %
Channel Frequency Spread	38 MHz	38 MHz	38 MHz	38 MHz

*¹ Maximum capability depends on the number of programmed zones/groups and repeater channels.

Specifications

■ UHF Mobile Radios

UHF		UHF		UHF		UHF	
TK-8189		TK-8180		TK-8160		TK-8162	
GENERAL							
Frequency Range	Type E: 400 ~ 470 MHz	Type E: 400 ~ 470 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz
Number of Channels	Max. 512*1	Max. 512*1	Max. 128*1	Max. 128*1	Max. 16*1	Max. 16*1	Max. 16*1
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Channel Spacing	12.5, 20, 25 kHz	12.5, 20, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz	Type E: 12.5, 20, 25 kHz Type E3: 12.5, 25 kHz
Input Voltage	13.2 V DC (10.8 ~ 15.6 V DC)	13.2 V DC (10.8 ~ 15.6 V DC)	13.6 V DC ± 15 %	13.6 V DC ± 15 %	13.6 V DC ± 15 %	13.6 V DC ± 15 %	13.6 V DC ± 15 %
Current Drain	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A	Standby: 0.4 A
	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A	Receive: 1.0 A
	Transmit: 9.0 A	Transmit: 9.0 A	Transmit: 8.0 A	Transmit: 8.0 A	Transmit: 8.0 A	Transmit: 8.0 A	Transmit: 8.0 A
Operating Temperature Range	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C
Frequency Stability	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)	± 2.5 ppm (-30 °C ~ +60 °C)
Dimensions (W x H x D)	160 x 45 x 157 mm	160 x 45 x 157 mm	160 x 43 x 107 mm	160 x 43 x 107 mm	160 x 43 x 107 mm	160 x 43 x 107 mm	160 x 43 x 107 mm
Weight (net)	1.5 kg	1.5 kg	1.0 kg	1.0 kg	1.0 kg	1.0 kg	1.0 kg
RECEIVER							
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
Sensitivity							
12 dB SINAD	0.25 μV (25 kHz)	0.25 μV (25 kHz)	0.28 μV (25 kHz)	0.28 μV (25 kHz)	0.28 μV (25 kHz)	0.28 μV (25 kHz)	0.28 μV (25 kHz)
	0.25 μV (20 kHz)	0.25 μV (20 kHz)	0.28 μV (20 kHz)*2	0.28 μV (20 kHz)*2	0.28 μV (20 kHz)*2	0.28 μV (20 kHz)*2	0.28 μV (20 kHz)*2
	0.28 μV (12.5 kHz)	0.28 μV (12.5 kHz)	0.35 μV (12.5 kHz)	0.35 μV (12.5 kHz)	0.35 μV (12.5 kHz)	0.35 μV (12.5 kHz)	0.35 μV (12.5 kHz)
	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)	-3 dBμV (25 kHz)
	-3 dBμV (20 kHz)	-3 dBμV (20 kHz)	-3 dBμV (20 kHz)*2	-3 dBμV (20 kHz)*2	-3 dBμV (20 kHz)*2	-3 dBμV (20 kHz)*2	-3 dBμV (20 kHz)*2
	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)	-2 dBμV (12.5 kHz)
Selectivity	80 dB (25 kHz)	80 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)	70 dB (25 kHz)
	75 dB (20 kHz)	75 dB (20 kHz)	70 dB (20 kHz)*2	70 dB (20 kHz)*2	70 dB (20 kHz)*2	70 dB (20 kHz)*2	70 dB (20 kHz)*2
	70 dB (12.5 kHz)	70 dB (12.5 kHz)	60 dB (12.5 kHz)	60 dB (12.5 kHz)	60 dB (12.5 kHz)	60 dB (12.5 kHz)	60 dB (12.5 kHz)
Intermodulation Rejection	70 dB	70 dB	65 dB	65 dB	65 dB	65 dB	65 dB
Spurious Response Rejection	80 dB	80 dB	70 dB	70 dB	70 dB	70 dB	70 dB
Audio Output	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion	4 W with less than 5 % distortion
Channel Frequency Spread	70 MHz	70MHz	30 MHz	30 MHz	30 MHz	30 MHz	30 MHz
TRANSMITTER							
Measurement	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard	EN Standard
RF Power Output	Max. 25 W	Max. 25 W	5 W / 25 W	5 W / 25 W	5 W / 25 W	5 W / 25 W	5 W / 25 W
Modulation	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)	± 5.0 kHz (25 kHz)
	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)	± 4.0 kHz (20 kHz)*2	± 4.0 kHz (20 kHz)*2	± 4.0 kHz (20 kHz)*2	± 4.0 kHz (20 kHz)*2	± 4.0 kHz (20 kHz)*2
	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)	± 2.5 kHz (12.5 kHz)
Spurious Emission	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz	-36 dBm ≤ 1 GHz
	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz	-30 dBm > 1 GHz
FM Hum & Noise	50 dB (25 kHz)	50 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)	45 dB (25 kHz)
	48 dB (20 kHz)	48 dB (20 kHz)	40 dB (20 kHz)*2	40 dB (20 kHz)*2	40 dB (20 kHz)*2	40 dB (20 kHz)*2	40 dB (20 kHz)*2
	45 dB (12.5 kHz)	45 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)	40 dB (12.5 kHz)
Microphone Impedance	600 Ω	600 Ω	600 Ω	600 Ω	600 Ω	600 Ω	600 Ω
Audio Distortion	Less than 3 %	Less than 3 %	3 % / 5 %	3 % / 5 %	3 % / 5 %	3 % / 5 %	3 % / 5 %
Channel Frequency Spread	70 MHz	70 MHz	30 MHz	30 MHz	30 MHz	30 MHz	30 MHz

*1 Maximum capability depends on the number of programmed zones/groups and repeater channels.

*2 Type E only

Repeaters

	VHF	VHF	UHF	UHF
	TKR-750	TKR-751	TKR-850	TKR-851
GENERAL				
Frequency Range	Type E: 146 ~ 174 MHz	Type E: 146 ~ 174 MHz	Type E: 440 ~ 470 MHz	Type E: 440 ~ 470 MHz Type E3: 400 ~ 430 MHz
Number of Channels	16	16	16	16
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Channel Spacing	25, 30 kHz (Wide) 12.5 kHz (Narrow)	20, 25, 30 kHz (Wide) 12.5 kHz (Narrow)	20, 25 kHz (Wide) 12.5 kHz (Narrow)	20*, 25 kHz (Wide) 12.5 kHz (Narrow)
Input Voltage	13.2 V DC ± 15 %	13.2 V DC ± 15 %	13.2 V DC ± 15 %	13.2 V DC ± 15 %
Current Drain	Standby: 0.8 A (0.3 A*1 with power save) Receive: 1.2 A Transmit / Receive: Less than 13 A	Standby: 0.8 A (0.3 A*1 with power save) Receive: 1.2 A Transmit / Receive: Less than 8 A	Standby: 0.8 A (0.3 A*1 with power save) Receive: 1.2 A Transmit / Receive: Less than 13 A	Standby: 0.8 A (0.3 A*1 with power save) Receive: 1.2 A Transmit / Receive: Less than 8 A
Duty Cycle	Receive: 100 % at 25 W Transmit: 100 % at 25 W	Receive: 100 % at 25 W Transmit: 100 % at 25 W	Receive: 100 % at 25 W Transmit: 100 % at 25 W	Receive: 100 % at 25 W Transmit: 100 % at 25 W
Operating Temperature Range	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C	-30 °C ~ +60 °C
Frequency Stability	± 2.0 ppm (-30 °C ~ +60 °C)	± 2.0 ppm (-30 °C ~ +60 °C)	± 1.5 ppm (-30 °C ~ +60 °C)	± 1.5 ppm (-30 °C ~ +60 °C)
Dimensions (W x H x D)	483 x 88 x 340 mm	483 x 88 x 340 mm	483 x 88 x 340 mm	483 x 88 x 340 mm
Weight (net)	9.7 kg	9.7 kg	9.7 kg	9.7 kg
RECEIVER				
Measurement	EN Standard	EN Standard	EN Standard	EN Standard
Sensitivity	20 dB SINAD: 0.45 µV	20 dB SINAD: 0.45 µV	20 dB SINAD: 0.45 µV	20 dB SINAD: 0.45 µV
Selectivity	85dB at ± 25 kHz 77dB at ± 12.5 kHz	83 dB at ± 25 kHz 77 dB at ± 12.5 kHz	85 dB at ± 25 kHz 82 dB at ± 20 kHz 77 dB at ± 12.5 kHz	83 dB at ± 25 kHz 80 dB at ± 20 kHz*2 77 dB at ± 12.5 kHz
Intermodulation Rejection	72 dB	72 dB	72 dB	72 dB
Spurious Response Rejection	90 dB	90 dB	90 dB	90 dB
Audio Output	4 W at 4 Ω, with less than 5 % distortion	4 W at 4 Ω, with less than 5 % distortion	4 W at 4 Ω, with less than 5 % distortion	4 W at 4 Ω, with less than 5 % distortion
Channel Frequency Spread	3 MHz	5 MHz	3 MHz	5 MHz
TRANSMITTER				
Measurement	EN Standard	EN Standard	EN Standard	EN Standard
RF Power Output	Hi / Low: 50 W / 25 W (default) (100 % duty at 25 W)	Hi / Low: 25 W / 1 W (default) (100 % duty at 1 ~ 25 W)	Hi / Low: 40 W / 25 W (default) (100% duty at 25 W)	Hi / Low: 25 W / 1 W (default) (100 % duty at 1 ~ 25 W)
RF Output Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Spurious Emission	-36 dBm ≤ 1 GHz -30 dBm < 1 GHz	-36 dBm ≤ 1 GHz -30 dBm < 1 GHz	-36 dBm ≤ 1 GHz -30 dBm < 1 GHz	-36 dBm ≤ 1 GHz -30 dBm < 1 GHz
Modulation	16K0F3E, 8K50F3E 14K0F2D, 7K50F2D	16K0F3E, 14K0F3E, 8K50F3E 14K0F2E, 12K0F2D, 7K50F2D	16K0F3E, 8K50F3E 14K0F2D, 7K50F2D	Type E: 16K0F3E, 14K0F3E, 8K50F3E 14K0F2E, 12K0F2D, 7K50F2D Type E3: 16K0F3E, 8K50F3E, 14K0F2D, 7K50F2D
FM Hum & Noise	50 dB at 5 kHz (Wide) 48 dB at 4 kHz (Wide) 45 dB at 2.5 kHz (Narrow)	50 dB at 5 kHz (Wide) 48 dB at 4 kHz (Wide) 45 dB at 2.5 kHz (Narrow)	50 dB at 5 kHz (Wide) 48 dB at 4 kHz (Wide) 45 dB at 2.5 kHz (Narrow)	50 dB at 5 kHz (Wide) 48 dB at 4 kHz (Wide)*2 45 dB at 2.5 kHz (Narrow)
Microphone Impedance	600 Ω	600 Ω	600 Ω	600 Ω
Audio Distortion	Less than 3 % at 1 kHz	Less than 3 % at 1 kHz	Less than 2.5 % at 1 kHz	Less than 2.5 % at 1 kHz
Band Spread	28 MHz	30 MHz	28 MHz	30 MHz
REPEATER CONTROL UNIT				
Signaling Tones	Max. 16	Max. 16	Max. 16	Max. 16
DQT Decoder/Encoder				
DQT Code	23 bits total; a 3-digit octal number (0 - 7, 12bits) with error correction (11 bits) 67 ~ 210.7 Hz (in 0.1 Hz steps)	23 bits total; a 3-digit octal number (0 - 7, 12bits) with error correction (11 bits) 67 ~ 210.7 Hz (in 0.1 Hz steps)	23 bits total; a 3-digit octal number (0 - 7, 12bits) with error correction (11 bits) 67 ~ 210.7 Hz (in 0.1 Hz steps)	23 bits total; a 3-digit octal number (0 - 7, 12bits) with error correction (11 bits) 67 ~ 210.7 Hz (in 0.1 Hz steps)
Decoder / Encoder Tone Frequency	250 ms or less	250 ms or less	250 ms or less	250 ms or less
Decoder Response Time	140 to 200 ms	140 to 200 ms	140 to 200 ms	140 to 200 ms
Squelch Trail Elimination Time	± 0.3 % or less	± 0.3 % or less	± 0.3 % or less	± 0.3 % or less
Encoder Frequency Error	SINAD 8 dB or less	SINAD 8 dB or less	SINAD 8 dB or less	SINAD 8 dB or less
Sensitivity	Off - 30 min.	Off - 30 min.	Off - 30 min.	Off - 30 min.
Time-out Timer	Off - 10 sec.	Off - 10 sec.	Off - 10 sec.	Off - 10 sec.
Hang-up Timer				
EXTERNAL CONTROL				
CWID	Max. modulation: 40 % ± 10 %, CW tone frequency: 400 Hz - 2 kHz; Morse code speed: 5 ~ 30 words / min.; Max. character memory: Up to 32 (incl. space)			
CW message	Max. character: Up to 32 / bank (incl. Space); No. of banks: 8			
Test Tone	Max. modulation: 60 %; Test tone frequency: 300Hz ~ 3 kHz			
5-Tone Standard	EEA, ZVEI, CCIR, ZVEI-2, EIA, Kenwood			

*1 Operating mode; DC-IN: Backup FAN: Temp SAVE: ON DISP: OFF

*2 Type E only

Listen to the Future

Kenwood has always connected with people through sound. Now we want to expand the world of sound in ways that only Kenwood can, listening to our customers and to the pulse of the coming age as we head toward a future of shared discovery, inspiration and enjoyment.



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